

International Astronomical Union (IAU) Symposium 360 Astronomical Polarimetry 2020
New Era of Multi-Wavelength Polarimetry
2021 March 22 – 26, Hiroshima Japan
<https://astropol2020-iau.jp>

From March 22 through 26, 2021, the Science Organization Committee of the International Astronomical Union (IAU) 360 Astronomical Polarimetry 2020 - New Era of Multi-wavelength Polarimetry organized the symposium. The symposium was held as scheduled and was a great success.

The first Astropol series conference was held in the U.S. in the late 1970s, and for more than 40 years, the series has been held only in Europe and the U.S. However, with great support from many people in Japan and abroad, we had planned since 2014 and succeeded in realizing our wish to bring the first Astropol conference in Asia to Japan. We want to sincerely thank the IAU for their support in organizing this international symposium.

When we planned the symposium, the COVID-19 public health crisis broke out in early 2020. The symposium was initially scheduled to be held in March 2020. However, since the crisis did not expect to abate anytime soon, we decided to hold the conference one year later than was originally scheduled. The situation of COVID-19 has been in the same status even in 2021. Thus, we decided to hold the symposium in a hybrid format (online and onsite).

One hundred and sixty-eight researchers from 29 countries participated, and 129 papers were submitted and presented in the symposium. Ninety-five percent of the participants attended online, and 5 percent were carefully selected to be researchers who did not come from or pass through a declared emergency area. Strict infection control measures were applied and implemented. (Excursions and dinners were both canceled.)

The SOC members voted for the Best Poster Award and Best Presentation Award (for oral presenters) for young researchers during the symposium. Five young researchers, including doctoral students and postdoctoral fellows, were selected and received a certificate and a grant for publication (including open access) in a journal (PASJ). The year 2020 celebrated the 100th anniversary of the IAU, and this was the first time in the 100-year history of the symposium that an excellence award was given to a young scientist.

After the IAU science session, the symposium was followed by an educational and promotional activity entitled "Exploring Black Holes with 'Polarized Light.'" The online seminar "The Shape of Black Holes Explored by Polarized Light" was held on May 23 from 4:00 p.m. in collaboration with the Hiroshima City Children's Museum of Science and Culture. During the science session, the EHT collaboration team issued a press release on the polarization observation of the M87 galactic center, which was the subject of a combined

lecture by EHT member Dr. Sasada (Hiroshima University at the time) and a lecture on polarization and polarized light observation in general. Many participants from Hiroshima Prefecture asked active questions during the lecture, and the event was a great success. Cambridge University Press, the official publisher of the IAU symposium, will publish the proceedings of the international symposium 360.

Symposium Program



Last updated: Mar. 22, 2021: The time of the morning/evening Poster Viewing sessions has been corrected for (making consistent with the [presenter's available time on Remo in the Google spreadsheet.](#))

Date and time are shown in Japan Time Zone (JST = UT+9h).

[Day 1 \(Monday\)](#) | [Day 2 \(Tuesday\)](#) | [Day 3 \(Wednesday\)](#) | [Day 4 \(Thursday\)](#) | [Day 5 \(Friday\)](#)




Japan: July 10, 2023 5:22:54 PM


Day 1 22-Mar

		Session I	Instrumentation, technique, theory	
Chair: B.-G. Andersson				
10:00	10:15	SOC/LOC chairs	Opening remarks	
10:15	10:35	C-1-01	Jan Tauber	 Planck Polarized Data and the Planck Legacy Archive
10:35	11:15	I-1-01	Laura Fissel	Submillimeter Polarimetry and Next-generation Instrumentation
11:15	11:35	Break (20 min)		
Chair: Antonio Mario Magalhaes				
11:35	11:55	C-1-02	Konstantinos Tassis	 PASIPHAE: Elucidating Stubborn CMB Polarization Foregrounds with Stellar Optopolarimetry
11:55	12:35	I-1-02	Valentina Vacca	Extragalactic Magnetic Fields from Polarimetric Radio Observations: Present & Future
12:35	13:40	Lunch Poster Viewing 1-1 (65 min)		
Chair: Motohide Tamura				

13:40 14:00 I-1-03 Yusei Hama  MIRIAM: IR and Visual Wide Area Survey




13:40	14:20	I-1-03	Hans-Martin Schmid	Near-IR and visual High Angular Resolution Polarimetry with AO Systems
14:20	14:40	C-1-03	Frans Snik	A Polarimetric Upgrade for the 2.6-m VLT Survey Telescope
14:40	15:00	C-1-04	Maksim Gabdeev	New Multi-Mode Photometer Polarimeter of SAO RAS. Its Application for Searching Polar Candidates.
15:00	15:20	C-1-05	Hiromitsu Takahashi	XL-Calibur, the Next-generation Balloon-borne Hard X-ray Polarimeter
15:20	15:40		Break (20 min)	
15:40	16:00	C-1-06	Denis Bernard	 Polarimetry of Gamma Rays Converting to e^+e^- Pairs: Performance of Silicon Strip Detectors-based Telescopes
16:00	16:20	C-1-07	Nicolas De Angelis & Johannes Hulsman	POLAR-2: Development of a Large Scale Gamma-ray Polarimeter
16:20	16:40		Break (20 min)	
Chair: Masafumi Matsumura				
16:40	17:20	I-1-04	Thiem Hoang	Grain Alignment Mechanisms: Current Status and Perspectives
17:20	17:40	C-1-08	Valentin LE GOUELLEC	Constraining the Dust Grain Alignment Mechanism(s) Responsible for the (Sub-)millimeter Dust Polarization Observed in Class 0 Protostellar Cores
17:40	18:00	C-1-09	Alex Lazarian	Synergy of Polarization and Gradients as a New Way to Explore magnetic fields
18:00	18:20	C-1-10	Boy Lankhaar	PORTAL: Polarized Line Radiative Transfer in Three Dimensions Probing Cosmic Magnetic Fields Using Molecules



18:20	18:40			Poster flash talk Session I
20:30	21:30			Poster Viewing 1-2 (60 min)
<i>Day 2</i>	23-Mar			
6:30	7:30			Poster Viewing 2-1 (60 min)
			Session II	Solar system, exoplanets, disks
				Chair: Masateru Ishiguro
9:30	10:10	I-2-01	Irina Belskaya	 Optical Polarimetry of Asteroids
10:10	10:30	C-2-01	Rob van Holstein	 First Polarimetric Detections of Unresolved Disks around Young, Directly Imaged Substellar Companions with SPHERE-IRDIS
10:30	10:50			Break (20 min)
10:50	11:10	C-2-02	Jun Takahashi	Lunar Earthshine Polarimetry in Near-Infrared: Signature of Ocean Glint
11:10	11:30	C-2-03	Dora Klindžić	 Observing the Earth as an Exoplanet with LOUPE
11:30	11:50	C-2-04	Joten Okamoto	UV Spectro-Polarimetry in the Solar Atmosphere -- Results from Two Sounding Rocket Experiments CLASP1 and CLASP2
11:50	11:55			Poster flash talk Session II
11:55	13:00			Lunch Poster Viewing 2- 2 (65 min)

		Session III		Interstellar matter, star forming region
Chair: Hiroko Shinnaga				
13:00	13:40	I-3-01	Shuichiro Inutsuka	The Role of Magnetic Field in the Bubble-filament Paradigm of Star Formation
13:40	14:00	C-3-01	Tetsuo Hasegawa	The JCMT BISTRO Survey: The Magnetic Field Structures in Dense Molecular Clouds revealed
14:00	14:20	C-3-02	Yasuo Doi	Multiscale Magnetic Field Structure in and around the Perseus molecular cloud
14:20	14:40		Break (20 min)	
14:40	15:20	I-3-02	Kohji Tomisaka	Polarimetry Observational Visualization: Molecular Outflow and Filaments
15:20	15:40	C-3-03	Jia-Wei Wang	Formation of the Hub-Filament System G33.92+0.11: Local Interplay between Gravity, Velocity, and Magnetic Field
15:40	16:00	C-3-04	Doris Arzoumanian	The Complex But Organized Magnetic Fields Of The NGC6334 Star-Forming Filament
16:00	16:20		Break (20 min)	
Chair: Francois Menard				
16:20	17:00	I-3-03	Francois Levrier	 Magnetic Fields in the Diffuse Medium as Inferred from Planck Observations
17:00	17:20	C-3-05	Vibor Jelic	Multi-wavelength Analysis of Radio-polarimetric Data at Low Radio Frequencies
17:20	18:00	I-3-04	Georgia Panopoulou	Observations of Magnetic Fields in the ISM
18:00	18:20	C-3-06	Lapo Fanciullo	Studying Dust Properties, Grain Alignment And Magnetic Field

Structure With Multi-Wavelength
Submillimeter Polarization

18:20	18:25			Conference Picture 1
				(Business session)
20:30	21:30			Poster Viewing 2-3 (60 min)
Day 3	24-Mar			
6:30	7:30			Poster Viewing 3-1 (60 min)
9:25	9:30			Conference Picture 2
			Session III	Interstellar matter, star forming region cont'd
				Chair: Thushara Pillai
9:30	10:10	I-3-07	Anaelle Maury	Investigating the Roles of Magnetic Field during the Star and Disk Formation Process with Polarized Dust Emission
10:10	10:30	C-3-07	Qizhou Zhang	Magnetic Fields in Dense Cores Associated with protostellar Clusters
10:30	11:10	I-3-08	Gabriel Franco	Dust Polarization: from Molecular Clouds to Circumstellar Disks
11:10	11:30			Break (20 min)
11:30	11:50	C-3-08	Ryo Kandori	Near Infrared Polarimetry of Molecular Cloud Cores with SIRPOL
11:50	12:10	C-3-09	Hauyu Baobab Liu	Magnetically Regulated Disk- formation in the Inner 100 AU Region of the Class 0 Young Stellar Object OMC-3/MMS 6 Resolved by JVLA and ALMA

12:10	12:30	C-3-10	Tomoya Hirota	Polarization of SiO Lines in Orion Source I
12:30	12:50	C-3-11	Daria Dall'Olio	 Polarization Properties of Methanol Masers
			Session VI	Special Communication
12:50	13:00	C-6-1	Antonio Mario Magalhães	An IAU Newsletter for the Photometry and Polarimetry Community
12:50	13:10	Poster flash talk Session III		
13:10	14:10	Lunch Poster Viewing 3-2 (60 min)		
afternoon				
20:30	21:30	Poster Viewing 3-3 (60 min)		
Day 4 25-Mar				
6:30	7:30	Poster Viewing 4-1 (60 min)		
			Session IV	Stars, circumstellar matter, winds, jets
Chair: Jennifer L. Hoffman				
9:30	10:10	I-4-01	Manisha Shrestha	 Polarimetry to Unveil Physics of Stellar Wind and Local Interstellar Medium
10:10	10:30	C-4-01	Laurence Sabin	 Polarization Analysis of Evolved Intermediate Mass Stars
10:30	10:50	C-4-02	Lucero Uscanga	Polarization Observations in Maser-emitting Planetary Nebulae

10:50	11:10		Break (20 min)	
Chair: Claudia V. Rodrigues				
11:10	11:30	C-4-03	Hiroko Shinnaga	Dynamic Mass Outflow and Circumstellar Magnetic Field of A Red Supergiant
11:30	11:50	C-4-04	Heloise F. Stevance	25 Years of Type IIb Supernova Spectropolarimetry: New Insights On SN 1993J
11:50	13:00		Lunch Poster Viewing 4-2 (70 min)	
Chair: Masafumi Matsumura				
13:00	13:20	C-4-05	Sei Saito	 Optical Spectropolarimetry of Superluminous Supernova to Probe the Geometry
13:20	13:40	C-4-06	Jiro Shimoda	H-alpha Polarimetry in Supernova Remnants as a Unique Diagnostics of Cosmic-ray Modified Shocks
13:40	14:20	I-4-02	Stefano Bagnulo	 Five Decades of Spectropolarimetry of White Dwarfs: from the Earliest Discoveries to the Modern Volume-Limited Surveys
14:20	14:40	C-4-07	Louis Du Plessis	Phase-resolved Polarimetric Constraints on the White Dwarf Pulsar in AR Sco
14:40	14:50		Poster flash talk Session IV	
14:50	15:10		Break (20 min)	
			Session V	Extragalactic polarimetry, galaxies, CMB
Chair: Stephen Potter				
15:10	15:50	I-5-	Enrique	Tracing the Magnetic Fields of Nearby

		01	Lopez Rodriguez	Galaxies Using Far-Infrared Polarimetry
15:50	16:10	C-5- 01	Rei Enokiya	Star Forming Activities Induced by Strong Global Magnetic Fields in the Galactic Center
16:10	16:20		Break (10 min)	
Chair: Francois Menard				
16:20	16:40	C-5- 02	Dana Alina	Polarisation of the Magellanic Clouds with the Planck telescope data
16:40	17:00	C-5- 03	Alejandro S. Borlaff	The Multi-phase Spiral Magnetic Field of M51
17:00	17:20	C-5- 04	Kohei Kurahara	Large-scale Magnetic Vector Structure of the Nearby Galaxies Probed by Synchrotron Polarization
17:20	17:40		Poster flash talk Session V	
20:30	21:30		Poster Viewing 4- 3 (60 min)	
<i>Day 5</i>	26-Mar			
6:30	7:30		Poster Viewing 5-1	
			Session V	Extragalactic polarimetry, galaxies, CMB
Chair: B-G Andersson				
9:30	9:50	C-5- 05	Jordan Guerra A.	Magnetic Field of the Galaxy M82
9:50	10:10	C-5- 06	Annie Hughes	The Magnetic Field at the Heart of Starburst Galaxy NGC253
10:10	10:30	C-5- 07	Lucas Grosset	Magnetic Field in the Central Region of the Circinus Galaxy with SOFIA/HAWC+

10:30	10:50		Break (20 min)	
Chair: Antonio Mario Magalhaes				
10:50	11:10	C-5-08	Santiago Gonzalez-Gaitan	Extended Optical Polarimetry of the Circinus Galaxy
11:10	11:30	C-5-09	Đorđe Vladimir Savić	Radiative Transfer Modeling of VLT/FORS2 Polarimetric Imaging of AGN in Circinus Galaxy
11:30	12:30		Lunch Poster Viewing 5-2 (60 min)	
Chair: Koji Kawabata				
12:30	13:10	I-5-02	Kenji Toma	Polarimetric Studies of GRBs, AGN Jets, and Axion Dark Matter
13:10	13:30	C-5-10	Takuya Akahori	Linearly-Polarized Fast Radio Burst: Challenge to Discover the Magnetized Cosmic Web
13:30	13:50	C-5-11	Makoto Uemura	Finding Features in Erratic Polarization Variations of Blazars
13:50	14:10	C-5-12	Yunguo Jiang	 Correlations between Polarization and Optical Fluxes for Several Blazar Objects
14:10	14:30		Break (20 min)	
Chair: Stephen Potter				
14:30	15:10	I-5-03	Jonathan Aumont	Challenges of the Measurement of Primordial CMB B-modes
15:10	15:30	C-5-13	Yutaro Sekimoto	LiteBIRD Satellite: Polarimetry of Cosmic Microwave Background (CMB)
15:30	15:50		Break (20 min)	
15:50	16:10		Poster / Presentation Award	

16:10	16:30	Closing Remarks
16:30	16:50	Next Astropol Discussion
		Adjourn
20:30	21:30	Poster Viewing 5-3